

THURSDAY
MARCH 23, 2006

Scaife Hall Auditorium
Room 125

4:00 PM
Refreshments—3:30 PM



ASIT DAN
IBM

Dr. Dan has been with the IBM Research Division since 1990 and is at the forefront of research and development in Service Oriented and Autonomic computing and, before that, in Transaction-processing architectures and Multimedia servers.

He has managed research groups working on Business-to-Business Integration, and subsequently, on the development of the infrastructure for supporting dynamic and SLA-driven Web services, Grid and Autonomic computing. He holds several top-rated patents in these areas and has received two IBM Outstanding Innovation Awards and ten IBM Invention Achievement Awards. Twice, he received the honor of IBM Master Inventor for his work in these areas. Recently, he joined the IBM Software Group working on SOA Strategy.

Dr. Dan received a Ph.D. from the University of Massachusetts, Amherst. His doctoral dissertation received an Honorable Mention in the 1991 ACM Doctoral Dissertation Competition and was published by the MIT Press. He has published extensively, including several book chapters, and a book on multimedia servers. He has served on many professional committees, including ACM Doctoral Dissertation Award Committee. Currently, he is serving as the program chair for the International Conference on Service Oriented Computing (<http://www.icsoc.org>).

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For more information:
<http://www.ece.cmu.edu/seminar>

BUILDING SCALABLE DISTRIBUTED SYSTEMS USING SERVICE LEVEL AGREEMENTS

Service Oriented computing and Autonomic computing are two very important, emerging, complementary paradigms for distributed computing, for handling the complexities of large scale distributed systems, such as today's IT systems. Service Oriented computing paradigm helps to componentize and align the IT systems with business services and objectives realized via the IT systems and is changing the way software applications are designed, architected, delivered and consumed. Services that are platform-independent computational elements can be described, published, discovered, orchestrated and programmed using standard protocols to build networks of collaborating applications distributed within and across organizational boundaries. The Autonomic computing paradigm, on the other hand, makes IT systems resilient, responsive, efficient, and secure with the ability to manage themselves and dynamically adapt to changes in accordance with business policies and objectives. The overall system is thus both flexible and robust.

In this talk, I will explore use of service level agreements in formalizing relationships and interactions across services, be it within or across organization boundaries, and across application services or layers of middleware and platform services supporting the execution of application services. This formalization of expectations of service requesters and assurances by service providers embodied via agreements is at the core of enabling Service Oriented and Autonomic computing paradigms.